

**Notice of Allowability**

Application No.

10/772,328

Examiner

Frank M. Lawrence

Applicant(s)

MCKENZIE, JOHN R.

Art Unit

1724

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed July 22, 2005.
2. ☒ The allowed claim(s) is/are 1, 4-13 and 15-21 (renumbered as 1, 3-18 and 2).
3. ☒ The drawings filed on 06 February 2004 and 22 July 2005 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All b) ☐ Some\* c) ☐ None of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

### EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Sean Goodwin on August 24, 2005.

The application has been amended as follows:

In the Claims:

Claim 1 has been replaced by the following substitute claim:

---1. (Currently Amended) Apparatus for treating a gas stream containing liquid and being adapted to a vessel having cylindrical side walls, a bottom end, and a tangential gas inlet adjacent a top end, the apparatus comprising:

a base plate positioned below the tangential gas inlet;

at least one cylindrical shell arranged on the base plate and adjacent the wall portion for forming at least one annular cavity extending upwardly from the base plate and having an open end for receiving liquid therein;

an opening in the base plate at each annular cavity for draining liquid from the at least one annular cavity;

Art Unit: 1724

an outlet for the gas stream positioned adjacent the base plate and within the annular shells; and

a plate above the gas outlet for directing the gas stream over the one or more annular cavities before a drier gas stream is removed through the gas outlet,

wherein the base plate divides the vessel into an upper gas cyclonic separation portion above the base plate and a lower liquid storage portion for receiving liquid from the one or more openings in the base plate.---

Claim 2 has been canceled.

In line 1 of claim 4, "claim 1" has been changed to ---claim 21---.

Claim 13 has been replaced by the following substitute claim:

---13. (Currently Amended) Apparatus for treating a gas stream containing liquid comprising:

an insert adapted for installation into a cylindrical vessel having a bottom end and having a tangential gas inlet adjacent a top end for spinning the gas stream, the insert having a bottom end and a top end;

a base plate at a bottom end of the insert;

one or more cylindrical annular shells arranged on the base plate, the first of the shells positioned adjacent the vessel for forming at least one annular cavity extending upwardly from the base plate for receiving liquid therein;

Art Unit: 1724

one or more openings in the base plate at each annular cavity for draining liquid from each annular cavity;

an outlet for the gas stream positioned adjacent the base plate and within the annular shells; and

a plate for directing the spinning gas stream over the annular shells before a drier gas stream is removed through the gas outlet,

wherein the base plate divides the vessel into an upper gas cyclonic separation portion above the base plate and a lower liquid storage portion for receiving liquid from the one or more openings in the base plate.---

Claim 14 has been canceled.

In line 1 of claim 15, "claim 14" has been changed to ---claim 13---

In line 1 of claim 18, "claim 14" has been changed to ---claim 13---

In line 1 of claim 20, "claim 14" has been changed to ---claim 13---

The following new claim 21 has been added:

---21. (new) The apparatus of claim 1 wherein an annular cavity is formed between the vessel side wall and one of the at least one cylindrical shell.---

2. The following is an examiner's statement of reasons for allowance: Applicant has agreed to an examiner's amendment to incorporate allowable subject matter into independent claims 1

Art Unit: 1724

and 13. Specifically, the prior art of record fails to disclose the recited gas separating apparatus, wherein the base plate divides the vessel into an upper gas cyclonic separation portion above the base plate and a lower liquid storage portion for receiving liquid from the one or more openings in the base plate.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Drawings***

3. The drawings were received on July 22, 2005. These drawings are approved.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frank M. Lawrence whose telephone number is 571-272-1161. The examiner can normally be reached on Mon-Thurs 7:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on 571-272-1166. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 1724

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Frank M. Lawrence  
Primary Examiner  
Art Unit 1724

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*Frank Lawrence*  
P-24-05